Ministry of Health
Ethiopian Health Professionals' Licensure Examination

PHARMACY
Ginbot 2015/May 2023

Full Name_____

PART: TWO **TIME ALLOWED: 2:30 HOURS**

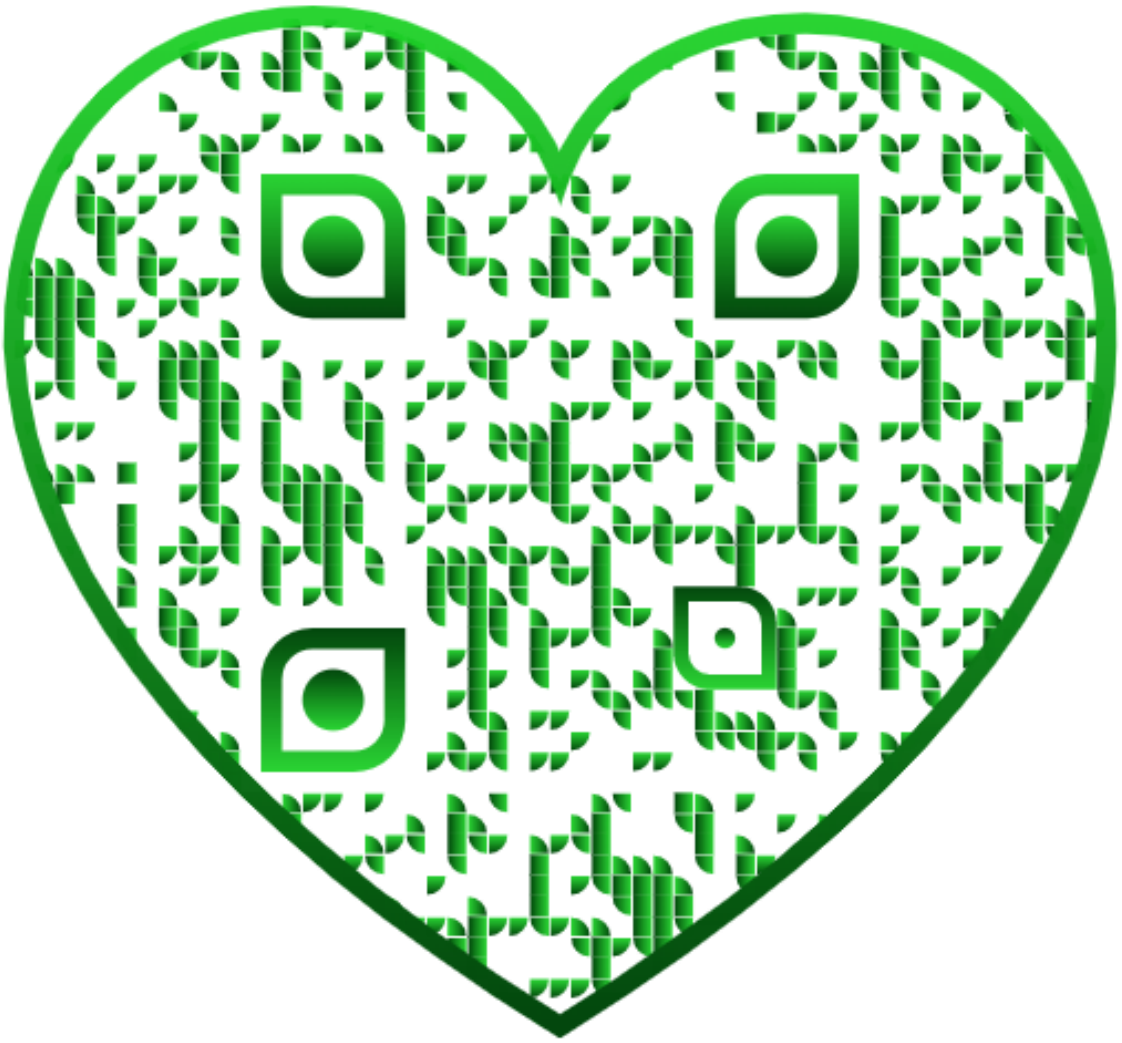
GENERAL DIRECTIONS

IN THIS EXAMINATION, THERE ARE A TOTAL OF **100** MULTIPLE CHOICE QUESTIONS. SELECT THE BEST ANSWER AND **BLACKEN** ONLY THE LETTER OF YOUR CHOICE ON THE SEPARATE ANSWER SHEET PROVIDED. FOLLOW THE INSTRUCTIONS IN THE ANSWER SHEET AND THE EXAMINATION PAPER CAREFULLY. USE ONLY PENCIL TO MARK YOUR ANSWERS. YOUR ANSWER MARK SHOULD BE **HEAVY** AND **DARK** COVERING THE ANSWER SPACE COMPLETELY. IF YOU CHANGE YOUR ANSWER, PLEASE ERASE IT COMPLETELY AND NEATLY.

YOU ARE ALLOWED TO WORK ON THE EXAMINATION FOR **2:30** HOURS. WHEN TIME IS CALLED, YOU MUST IMMEDIATELY STOP WORKING, PUT YOUR PENCIL DOWN, AND WAIT FOR FURTHER INSTRUCTIONS.

ANY FORM OF CHEATING OR AN ATTEMPT TO CHEAT IN THE EXAMINATION WILL RESULT IN AN AUTOMATIC DISMISSAL FROM THE EXAMINATION HALL AND CANCELLATION OF YOUR SCORE(S). PLEASE MAKE SURE THAT YOU HAVE WRITTEN ALL THE REQUIRED INFORMATION IN THE ANSWER SHEET BEFORE YOU START TO WORK ON THE EXAMINATION. YOUR ANSWER SHEET WILL NOT BE MARKED UNLESS YOUR QUESTION PAPER IS RETURNED.

DO NOT TURN THIS PAGE OVER UNTIL YOU ARE TOLD TO DO SO.



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Pharmacy Exam
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PART TWO

Number of Items: 100 **Time Allowed: 2:30 hours**

DIRECTTIONS: Each of the following questions is followed by four possible alternative answers. Read each question carefully and **blacken** the letter of your best choice on the separate answer sheet provided.

1. A production pharmacist is preparing ibuprofen core tablet for Aqueous-Film-Coating in tablet production line. Tablet coating is a complex process and appropriate parameters have to be adjusted. He sent a sample to an in-process quality control laboratory requesting to check core tablet parameters.

   What is the most likely core tablet parameter the production pharmacist needs to check?

   A. Friability B. Viscosity C. Dissolution D. Disintegration

2. A pharmacist wants to select gelatin for preparing ibuprofen soft gelatin capsule after evaluating its grade.

   What test type should be used?

   A. Content B. Viscosity C. Disintegration D. Bloom strength

3. In tablet production line, a production pharmacist is producing tablet containinghygroscopic material. After the tablets are produced, the available packaging materials are blister packing and strip packing materials.

   What is the most appropriate packaging material for this tablet product?

   A. Waxy paper C. Aluminum foil

   B. Polypropylene D. Polyvinyl chloride

4. A hospital pharmacist compounded cacao butter suppository. He polished and packed it in aluminum foil. The next step is to label and dispense the product to patients.

   What is the most important labeling information for this product?

   A. Do not share this with others
   B. Store in refrigerator
   C. Not to be taken by mouth
   D. For external use only

5. A production pharmacist assigned in sterile drug production wants to select the primary packaging material for the drug he produces.

   What should be the property of the packaging material in this case?

   A. Single dose
   B. Child-resistance
   C. Tamper-resistant
   D. Compatible with product

6. A pharmacist who is working in a research and development unit of pharmaceutical manufacturing industry was assigned to determine the concentration of the API by polarography.

   Which parameter of the polarogram is most important for calculating concentration of the API?

   A. Residual current
   B. Half wave potential
   C. Diffusion current
   D. Decomposition potential

7. A pharmaceutical manufacturing industry produced a drug product and performed stability indicating studies to predict appropriate storage conditions for the drug. Based on the stability findings, the company recommended storing the product in average relative humidity of 40 percent, at controlled room temperature, in a moisture impermeable container.

   What is the most appropriate storage condition recommended by the manufacturer?

   A. Dry place
   B. Refrigerator
   C. Excessive heat
   D. Room temperature

8. A pharmaceutical factory has a plan to start manufacturing of calcium carbonate tablet (350 mg). The requested raw materials during product design are purchased and put into quarantine upon entry.

   What is the most appropriate procedure needed before the raw materials released?

   A. Divide for transporting to production area
   C. Document, repack and label
   B. Change the secondary container
   D. Sample and test for quality

9. A pharmaceutical technologist wants to prepare an ophthalmological semisolid preparation. The drug is water soluble and all ingredients for semisolid preparations are ready in the compounding room.

   What is the most appropriate type of semisolid preparation in this case?

   A. Ointment B. Paste C. Gel D. Cream

10. A pharmacist who is working in a hospital pharmacy compounding unit wants to prepare cream for topical fungal treatment. She has collected excipients for oil and water phase. Another ingredient, which enhances viscosity of the emulsion, is also required.

    What is the most appropriate excipient for this purpose?

    A. Methyl paraben B. White wax C. Borax D. Glycerin

11. A pharmaceutical factory manufactured a batch of triamicinolone acetonide oral paste (0.1percent) and sent the sample to a quality control unit to ensure the content uniformity of the product.

    What is the most appropriate test the quality control personnel should perform?

    A. Minimal fill
    C. Homogeneity test
    B. Stability study
    D. In vitro drug release

12. A patient diagnosed for superficial ocular infection comes to a hospital pharmacy with a prescription requesting for extemporaneous compounding of the prescribed neomycin sulphate eye ointment (0.5percent). The pharmacist has validated the prescription and compounded the product.

    What is the most appropriate container the pharmacist should use for this product?

    A. Glass jar
    B. Glass tube
    C. Collapsible tube
    D. Wide-mouthed plastic jar

13. A patient comes to a community pharmacy with a prescription asking for preparing cetrimide ointment. A compounding pharmacist used fusion method and prepared a product. Once congealed, he ensured a uniform and smooth texture of the final product.

    What was the most likely technique used by the pharmacist to ensure the quality of the ointment in this case?

    A. Pass through colloid mill
    B. Rub with mortar and pestle
    C. Melt the entire mixture and cool
    D. Collect and remove irritating solid particles

14. Manufacturing pharmacists who is working at a pharmaceutical factory were delivering sterilized raw materials for gentamicin sulfate ophthalmic ointment manufacturing. They adhere to current good manufacturing practice principles to prevent contamination.

    What is the most appropriate material flow pattern into preparation area?

    A. Material movement from dirty to clean area
    B. Performed in hand lock designed door
    C. Bidirectional material flow
    D. Under unidirectional airflow

15. A pharmacist who is working in the research and development department of pharmaceutical industry wants to prepare hydrophilic oral solution of midazolam.

    What is the most likely activity performed by the pharmacist in this case to make this preparation?

    A. Use sterile environment
    B. Use organoleptic agents
    C. Use two miscible oily solvents
    D. Use high solute proportion than solvent

16. A pharmaceutical scientist designed a new form of a peptide drug. And he wants to have a drug that should be administered through a rout that bypasses the first pharmacokinetic phase.

    What is the appropriate route of administration?

    A. Buccal B. Rectal C. Intravenous D. Subcutaneous

17. A pharmaceutical scientist designed new formulation to increase oral bioavailability of highly hydrophobic cyclosporine. This form does not need dissolution process to release drug substance.

    What is the most likely selected form for the drug?

    A. Oil in water emulsion
    B. Nonaqueous suspension
    C. Aqueous suspension
    D. Aqueous solution

18. A pharmacist took 50 ml of a 0.1 M solution of the base diphenhydramine and titrated it with 0.1 M HCl to determine its extent of ionization. The pH was monitored with a glass membrane. After 3 ml of 0.1 M HCl have been added the pH of the solution is 8.82.

    What is the pKa of diphenhydramine?

    A. 9.0 B. 7.0 C. 8.0 D. 10.0

19. Apharmaceutical factory has been manufacturing chloramphenicol eye ointment, 1percent. To ensure the sterility of the product, the pharmacistuse separately sterilized raw materials. Additionally, all manufacturing, filling, handling and packing processes are performed under the controlled environment from microbes.

    What is the most likely technique that the pharmacist used to maintain product sterility?

    A. Dry sterilization B. Ionizing-radiation C. Autoclaving D. Aseptic

20. A hospital pharmacist dispensed two boxes of diclofenac sodium (25 mg per ml) for nurses giving care for hospitalized patients in surgery wards. The pharmacist attached a label on the medications 'open the container by breaking the neck at a pre-scored position and inject the product immediately'.

    What is the most likely primary container that can be used for this product?

    A. Vial B. Ampoule C. Glass bottle D. Prefilled syringe

21. A pharmacist was interested to sterilize a drug product. But, the method of sterilization he selected has limitations like removes rather than kills the organism, and it is only applicable to fluids.

    What type of sterilization technique does the pharmacist most likely select?

    A. Dry heat sterilization
    B. Radiation sterilization
    C. Filtration sterilization
    D. Steam sterilization

22. A pharmacist is working in sterile production unit of a pharmaceutical industry. She planned to start production activity of a new batch of ibuprofen injection.

    What is the first thing she should do before starting any production?

    A. Transfer materials and components from warehouse to classified rooms
    B. Cleaning and preparing container items introduced into the preparation
    C. Weigh raw materials in a weigh area and transfer to plastic bags
    D. Sterilize the equipment in the compounding area

23. A pharmaceutical analyst who is working at a pharmaceutical factory quality control unit is requested to test the quality of manufactured salmeterol + fluticasone powder for oral inhalation packed in metered dose inhaler before release.

    What are the most appropriate tests the pharmaceutical analyst should conduct?

    A. Viscosity test, friability test
    B. Hardness test, compatibility test
    C. Dissolution test, disintegration test
    D. Microbial count, content uniformity

24. A pharmaceutical company has been manufacturing adrenaline aerosol. The company has a plan to relocate the packaging and labeling room to reduce contamination happening during material flow.

What is the most appropriate place for relocation of packaging and labeling room?

A. Near warehouse
B. Near preparation area
C. Near quality control laboratory
D. Near finished product storage room

25. An inspection team from EFDA was visiting a pharmacy retail out late for periodic and scheduled inspection. During the inspection, they need to know the storage condition of vaccines. They ask the pharmacist to show an evidence of controlling the storage condition as per the manufacturing recommendation.

What would be the most appropriate evidence that the pharmacist should provide?

A. The functionality of the refrigerator
B. A humidity record of the refrigerator
C. A temperature record of the refrigerator
D. A calibration certificate of thermometer in the refrigerator

26. A medicines retail outlet establishment was inspected for fulfillment of criteria. The inspection team identified the medicines retail outlet establishment has wood-reinforced mud wall, wall painted with water proof paint, Roof allowing direct sunlight into the interior and Well-cleaned soil floor.

Which building features in the establishment is the most acceptable and suitable in this case scenario?

A. Roof allowing direct sunlight into the interior
B. Wall painted with water-proof paint
C. Wood-reinforced mud wall
D. Well-cleaned soil floor

27. Mr. X is a pharmacist who owns and manages a pharmacy establishment operating with his own professional license. A team of inspectors from EFDA found that he was absent from his pharmacy for about five times while it was open to clients. This happened after he was warned once due to the same reason.

What administrative measure is the most appropriate in this situation?

A. Initiate a criminal investigation against him
B. Suspend his license for 6 months
C. Revoke his license indefinitely
D. Hand him a written warning

28. A broken dry mixing machine in tablet production line of a company was maintained and checked for its functionality by the maintenance group. The quality assurance manager of the company orders one of the pharmacists to do equipment qualification test for the maintained dry mixing machine and make the instrument ready for use.

What is the most likely equipment qualification test to be done by pharmacists in the above case?

A. Design qualification
B. Installation qualification
C. Operation qualification
D. Performance qualification

29. Before using newly developed test method, a pharmaceutical analyst in quality control laboratory conducted method validation test to know the ability of the test method to distinguish the drug under the test from other similar substances that may be present in the same solution.

Which method validation parameter is most appropriate to be check in the above case?

A. Specificity B. Accuracy C. Precision D. Sensitivity

30. Apharmaceutical industries, some pharmaceutical products are expected to be sterile 100 percent (free from viable microorganisms), others are permitted to set limits for the presence of microorganisms.

    What types of products are expected to be 100 percent free from viable microorganisms in this scenario?

    A. Topical preparations
    B. Solid oral preparation
    C. Liquid oral preparations
    D. Ophthalmic preparations

31. In a medicine dossier application, the applicant has indicated overage use of active pharmaceutical ingredient during the production process without explainingthe reason for over use . A medicine dossier assessor asked a justification for the over utilization of the API during the production process.

    What most likely acceptable justification the manufacturer gives in this case?

    A. To compensate for losses during manufacture
    B. To make the medicine potent throughout the shelf life
    C. To extending the shelf-life of the highly degradable product
    D. To make the content of the medicine constant throughout the shelf life

32. It is evident that any new generic product seeking registration (market authorization) in Ethiopia needs to have sufficient evidence of bioequivalence (BE) with a comparator or innovator product through either in vivo or in vitro studies (whichever is appropriate). Even though this is the case, there are some exception in which products can be registered without in vivo bioequivalence BE data.

    What type of products may be entertained without an in vivo bioequivalence study data?

    A. Transdermal patches intended for systemic effects
    B. Modified-release pharmaceutical products designed to act systemically
    C. Critical-use oral immediate-release pharmaceutical products with systemic action
    D. Gases with pharmaceutical equivalence to the comparator product for systemic effects

33. Like modern medicines, herbal medicinal products are supposed to comply with regulatory requirements in order to be registered. In some cases, it is impossible to identify any active ingredients in herbal finished products.

What should be assumed for the registration of herbal finished products?

A. Consider the whole product as active ingredient and check compliance.
B. The product without any API and should be disregarded in registration.
C. It is irrelevant to comply with any regulatory requirement.
D. The product should be registered if it is safe.

34. During the review process a finished pharmaceutical product's dossier, the primary assessor at the Ethiopian Food and Drug Authority followed an approach which limits the assessment to the sections of the dossier based on an evidence of cGMP waiver and availability of market authorization certificate by the claimed stringent regulatory authorities.

What is the best approach the assessor follows?

A. Collaborative registration
B. Abbreviated approval
C. Conditional approval
D. Mutual recognition

35. Pharmaceutical companies hires promoters that execute pharmaceutical promotion services for them are regulated by the authority.

What is the most likely responsibility companies considered to apply?

A. Responsible for any advertisement done by employee (promoter)
B. Handover the employee as soon as he leaves the organization to the authority
C. Do criminal investigation against the promoter in the event of illegal behavior
D. Should not present any argument in defense of allegations against the promoter

36. A medical representative of a company is found promoting unregistered drug with misleading label . The Ethiopian Food and Drug Authority authorized a pharmacist to take appropriate action following the available rules and regulations.

What is the most appropriate action to be taken on the medical representative?

A. Give oral warning
B. Write a warning letter
C. Cancel education certificate
D. Cancel competency certificate

37. In resource limited countries, regulatory authorities and pharmaceutical companies wait for health care professionals, patients or consumers to make an effort to contact the authority or company and immediately report encountered adverse drug events (ADR). This is because it is the cheapest way to get ADR report.

What is the most likely Pharmacovigilance method explained in this scenario?

A. Active surveillance
B. Passive surveillance
C. Individual case safety report
D. Periodic safety up-to-date report

38. The EFDA receives, investigates, and analyzes adverse drug events from all over the country as part of its Pharmacovigilance function. It is also in charge of taking regulatory actions to ensure public safety.

Which of the regulatory actions listed below becomes a proportional measure when the risk of ADRs clearly outweighs the product benefits?

A. Product recalls
B. Package inserts revisions
C. Letters to health care providers about safety concerns
D. Modifying inadequate designs of product labeling and packaging

39. A pharmacist who is working at a community pharmacy in Ethiopia submits a re-registration application for professional license certificate. The certificate issuing body analyzed the document submitted for re-registration and confirmed that the degree of the applicant is forged.

What will be the most appropriate measure that should be taken by the certificate issuing body?

A. Canceling the degree
B. Suspending the degree
C. Revoking the certificate
D. Suspending the certificate

40. A licensed pharmacist worked in a community pharmacy from year 2008 to 2009 E.C. The pharmacist left his job since the end of 2009 due to family related problems. In 2014, the pharmacist wanted to return to his previous work because the pharmacist's family matters get a solution.

What is the most likely claim by the authority?

A. Consider as the pharmacist was practicing without a professional license
B. Inquire to bring a medical certificate proving the pharmacist's fitness
C. Allow to get back to work after renewing the license
D. Allow to work with competent professional's supervision

41. A pharmacist who has been working in a dispensary unit of hospital gets a chance for Msc program in social pharmacy and left his job to join the program. Two years later, he successfully completed his class and came to the regulatory body to have a license and continue his professional practice.

What is the most appropriate next step to be taken?

A. Get a new professional registration
B. Get a new job with the new profession
C. Get a medical certificate proving fitness
D. Get a renewed professional license

42. Miss Y. studied a bachelor of degree in pharmacy in a foreign country. After getting a professional license from the country's authority, she could not get a job for more than two years. Then, she decided to come to Ethiopia.

What is the most appropriate initial step she should take before starting a job in Ethiopia?

A. Complete six months to one-year internship program at assigned institution
B. Get a temporary professional license from the concerned authority in Ethiopia
C. Produce evidence of equivalence of qualification issued by the competent body
D. Get a new professional license from the concerned authority in Ethiopia

43. A pharmaceutical importer, which is actively working in pharmaceutical setting, assesses the need of mothers with breast feeding problems and wants to import and distribute infant formulas in addition to the current pharmaceuticals they imported.

What is the most likely legal requirement to be taken?

A. Renew a professional license if it is outdated
B. Get a special permit from the authority
C. Import quality and standard products
D. Get a new registration and license

44. A pharmacist is working in a hospital pharmacy of a specialized hospital. The pharmacist is classifying a controlled substances based on their schedule on the controlled substance acts. The pharmacist stored a product with a label of "Can be used medically under close supervision".

What is the most likely substance in this case?

A. Lysergic acid B. Morphine C. Codeine D. Heroin

45. A research team wanted to import pharmaceuticals that were not registered in the country's drug registration list. They wanted the product for a clinical trial purpose and consulted on the legal claim of the scenario.

What is the most appropriate legal response in this case?

A. Allow to import
B. Deny to import
C. Check the safety
D. Register first

46. Mr. Z is an athlete who runs on International Olympics. On checking the status of the athletes, he was banned from the sport as he was diagnosed with taking substance that improves physical activity.

What is the most likely substance that improves the performance of the athlete?

A. Opioids
B. Marijuana
C. Ox-codeines
D. Anabolic steroids

47. Mr. Z wanted to know the most effective medications among the anti-hypertensive drugs approved by the FDA. He wanted to get the answer from the best credible source of scientific information.

What is the most appropriate source of information for Mr. Z to use?

A. Media
C. Reputable journals
B. Text books
D. Reports of institutions

48. A health researcher wanted to answer a research question if smoking causes coronary heart disease in adults. The researcher identified smoker and non-smoker adults based on his sample size and wanted to examine if coronary heart disease is more frequent among the smokers.

Which study design method is recommended in this scenario?

A. Cohort study
C. Cross sectional study
B. Case control study
D. Nested case control study

49. A pharmacist, who is working in community pharmacy drug information center, has received a drug consultation request about "the temporal relationship between digoxin and Nifedipine". The pharmacist wants to appraise published scientific researches based on its method.

What point mostly considered in this case?

A. Were unique statistical tests used?
B. Were data collected appropriately?
C. Were inclusion\exclusion criteria provided?
D. What were the major null hypothesis and alternate hypothesis?

50. A researcher proposed a study on the prevalence of social drug use among adults in the Eastern parts of Ethiopia. He\she calculated a total sample of 384 using a single population proportion formula. There are 5000 adults in the sampling frame and, he\she selected the 384 respondents at a regular interval.

What is the most likely sampling technique the researcher used?

A. Systematic random sampling
C. Simple random sampling
B. Stratified sampling method
D. Cluster sampling method

51. A researcher, who is working in Ethiopian Public Health Institute, is highly concerned about COVID-19 and wanted to explore the reasons for denying to take COVID-19 vaccine among elderly in Ethiopia.

What is the most appropriate data collection method used by the researcher?

A. Focus group discussions
B. Key informant interview
C. Interview based questionnaire
D. Self-administered questionnaire

52. A pharmacist is interested to investigate the health status of patients with major mental disorder using visual analog scale ranging from 0 (the worst health state) to 100 (the best imaginable health state). The reported health status for the 10 patients shows 55, 65, 70,100,80,75,45, 35, 28, and 40.

What is the median of the above samples?

A. 85
B. 90
C. 50
D. 60

53. In a district, the mean systolic blood pressure of adults aged 20 to 40 is 130 mm Hg with a standard deviation of 10 mm Hg. A random sample of 64 adults aged 20 to 40 from a village of the same district has a mean systolic blood pressure of 132 mm Hg. A researcher wanted to test the hypothesis if the mean systolic blood pressure of the dwellers of village (aged 20 to 40) differs from that of the inhabitants of the district (aged 20 to 40) in general, at 0.05 alpha value.

What is the most likely test statistics used for the hypothesis?

A. Chi-square statistics
B. F-statistics
C. Z-statistics
D. T-statistic

54. A study revealed, that a variable was associated with antibiotics self medication, with an adjusted odds ratio of 1.2 and a 95 percent CI is 1.1 to 2.0.

What interpretation can be given in this scenario?

A. It is impossible to give interpretation based on the given information.
B. The independent variable is the predictor of the outcome variable.
C. There is no relationship between the dependent and the outcome variable.
D. The independent variable is negatively associated with the outcome variable.

55. Several studies with different designs and a study population have found that approximately 85 percent cases of lung cancer are due to cigarette smoking.

What is the most appropriate measure of association for this claim?

A. A relative risk
C. A prevalence risk
B. An incidence rate
D. An attributable risk

56. A biostatistician is comparing the rates of change of disease occurrence over several years. What is the most appropriate graphical method to present the result?

A. Pie chart
C. Line graph
B. Histogram
D. Frequency polygon

57. The head of a hospital pharmacy identified wastage of medicines in an inpatient ward as a critical problem in the operations of the pharmacy. The head assigned a junior pharmacist to create a plan to alleviate this problem.

What is the first step the junior pharmacist should take?

A. Reflection on the basic goals
B. Identification of root causes of the problem
C. Systematic assessment of the current situation
D. Selection of strategies based on defined criteria

58. Ministry of Health in collaboration with USAID\JSI. Inc has developed health commodities management systems software, which calculates the stock status of pharmaceuticals and hold transaction.

Which building blocks of health systems is improved?

A. Health work force
C. Information
B. Service delivery
D. Finance

59. A head of a hospital pharmacy has planned to achieve more than 90 percent in implementing Ethiopian Hospital Reform Implementation Guidelines (EHRIG) in the first quarter of 2014 fiscal year. He\she closely checks the progress of pharmacy services by using check lists every week.

What is the most appropriate role that describes the pharmacist's activity?

A. Monitoring
B. Evaluating
C. Intervening
D. Feed backing

60. Based on the country's health problems, trained man-power, financial resources and infrastructure, a National Drug List will be formulated with full consideration of safety, efficacy, quality and cost. And this is one of the eleven strategies used in facilitating implementation of the national drug policy of Ethiopia.

What is the most likely strategy discussed in this case?

A. Pharmaceutical supply
C. Man power training
B. Drug administration
D. Selection of drugs

61. A pharmaco-economic analysis should be done before selecting and incorporating medicines in to the National Medicine's List.

What is the most appropriate analysis to be done?

A. Cost-Utility Analysis
C. Cost-Effectiveness Analysis
B. Cost-Benefit Analysis
D. Cost-Minimization Analysis

62. Tenofovir + Lamuvidine + Efaverinze is one of the first line fixed dose combination Anti Retroviral Therapy (ART) used by patients on a daily basis. The total number of patients who are under this treatment is known. In addition, the numbers of patients eligible to take this fixed dose combination product have been increasing by five percent monthly. The ART Pharmacy Coordinator is responsible to undergo the quantification of this regimen.

What is the most appropriate quantification method the pharmacist should use?

A. Morbidity Method
C. Service level Projection Method
B. Consumption Method
D. Adjusted- Consumption Method

63. A hospital has a strong drug management team, where drug transaction information is recorded appropriately. The hospital started giving services in 2009 E.C. and, a team is required to conduct quantification for the year 2014 E.C.

What is the most appropriate method to be used in this case?

A. Morbidity method
C. Adjusted consumption method
B. Consumption method
D. Service level projection method

64. A pharmacist, who is assigned in the drug supply management unit of a new hospital, wants to forecast the quantity of pharmaceuticals needed. But, there is no information regarding previous consumption of pharmaceuticals and patient attendance.

What is the most appropriate quantification method to be used by the pharmacist?

A. Morbidity
C. Proxy-consumption
B. Consumption
D. Service level projection

65. A health center has 180,000 birr for pharmaceuticals purchase in 2014 fiscal year. The pharmacy head has quantified pharmaceuticals by categorizing as vital costing 80,000 birr, essential costing 90,000 birr and normal costing 20,000 birr.

What is the most appropriate solution for the scenario?

A. Decrease 50 percent budget from the Normal
B. Decrease 14 percent budget from the Essential
C. Decrease 10 percent budget from the Essential
D. Decrease 11 percent budget from the Vital

66. A pharmacist is working in the drug supply management unit of a hospital, which was established ten years back. The hospital mostly purchases its health commodities from local suppliers, unless there is emergency stock-out. The hospital has a complete record of the purchase and utilization of pharmaceuticals. There was also a relatively uninterrupted supply trend of pharmaceuticals. Thus, the pharmacist decided to quantify an amount of pharmaceuticals for the next budget year.

What is the most appropriate quantification method to use for the above scenario?

A. Morbidity
C. Proxy-consumption
B. Consumption
D. Service level projection

67. A total of 200 ampoules of Gentamycin injection were set as safety stock to prevent stock out of the drug from a hospital. The lead time is two weeks.

What is the average monthly consumption?

A. 100
B. 200
C. 600
D. 400

68. A hospital plans to purchase 10,000 cartons of disposable glove with a reasonable price. A market assessment indicates that there are a number of suppliers to purchase from.

What is most appropriate procurement method to use?

A. Open tender
C. Direct procurement
B. Restricted tender
D. Competitive negotiation

69. A health center purchased a single source medicine at negotiated price. The medicine purchased was patented to a single supplier.

Which method of procurement is applied by the the health center?

A. Competitive negotiation procurement
C. Open tender procurement
B. Restricted tender procurement
D. Direct procurement

70. A hospital's purchasing officer purchases 10000 capsules of 500mg Amoxicillin and 8000 tablets of 500mg Ciprofloxacillin. The team have collected Performa invoice from three potential suppliers with a low prices. However, the suppliers have no a renewed license.

What is the most likely problem in the logistics in this case?

A. Reliable supply
C. Reliable time
B. Right quantity
D. Right price

71. A pharmacist needs to place ordering of pharmaceuticals based on the Max-Min inventory control systems. At the end of the review period, he\she reviewed the stock level of all the pharmaceuticals and ordered enough stock to equal to reach the maximum stock level.

What is the most likely type of Max-Min inventory control system the pharmacist following?

A. Push ordering system
C. Continuous review system
B. Standard review system
D. Forced-ordering system

72. In the past month, a primary hospital's store manager reported that 30 male condoms were expired, 4 IUDs were stolen, 120 sachets of oral rehydration salts were loaned for other health facility and, 20 treated malaria nets were received from another health facility.

What is the most likely essential logistics data the report contains?

A. Loss or adjustment data
C. Stock transfer data
B. Dispensed to user data
D. Wastage data

73. Implementation of appropriate stock location is important to maintain the integrity of a drug until it is consumed by patients. Some products might need to be kept under cold environmental temperature, while others needed to be kept at room temperature.

What is the most likely temperature range of cold environmental condition?

A. 0 degree centigrade
C. 2 to 8 degree centigrade
B. 15 to 25 degree centigrade
D. 25 to 30 degree centigrade

74. A hospital store manager is processing request of pharmaceuticals from OPD dispensary. He\she is transcribing information from Intra-Facility Report and Resupply Form (IFRR) on to an issuing voucher. The information transcribed includes date, name-dispensing unit, code of the product, description of the product, batch number, unit of measurement, quantity received, total selling price and expiry date.

What is the most likely issuing voucher that the store manager used?

A. Model 20
B. Model 22
C. Model 06
D. Model 19

75. A pharmacist is keeping a stock record of paracetamol 500mg tablet. He\she places the record on the pallet where the medication is found. The record included the stock on hand of paracetamol for that batch only. Besides, any losses and adjustments for the specified batch were recorded.

What is the most likely type of stock keeping record the pharmacist using?

A. Bin Card
C. Inventory card
B. Stock card
D. Store ledger card

76. A store manager of a hospital does not know and implement when to order or issue, how much to order or issue and how to maintain appropriate stock levels of pharmaceuticals. Hence, morbidity increased due to shortage of essential drugs. On the other hand, overstock of less essential pharmaceuticals was reported which precipitates inefficient budget utilization.

What is the most likely system that the store manager fails to implement?

A. Distribution system
C. Proper storage system
B. Procurement system
D. Inventory control system

77. A hospital pharmacy department reported 100kg of empty PVC plastic and glass packaging wastes in the previous quarter. The hospital management decided to dispose it. And, the management requests the department to present the recent recommendation of EFDA.

What is the most likely waste disposal method the department should present?

A. Landfill
C. High-Temperature incineration
B. Burning in open place
D. Medium-Temperature incineration

78. A pharmacist, who is working in the central medical store, is arranging medicines with the aim of strengthening the security of medicines.

What is the best way of arrangement to be used?

A. Based on pharmacological category
C. Based on therapeutic category
B. Based on a commodity code
D. Based on the dosage form

79. A dispensary pharmacist requested 1000 capsules 500mg Amoxicillin capsules from a store. There were two batches of the medication. Batch A was received on September 20, 2020 and have an expiry date of December, 2022 while Batch B was received on January 20, 2020 and have an expiry date of December 2021.

What is the most appropriate inventory rotation to issue the medication?

A. First Expiry First out (FEFO)
C. Last in Last out (LIFO)
B. Last Expiry First Out (LEFO)
D. First in First Out (FIFO)

80. A purchased laboratory reagents were loaded on a transport vehicle. When the vehicle has arrived to the facility after 24 hours of a drive, some of the reagents were damaged.

What problem is most likely occurred?

A. Items were sub-standards
C. Items were not in good condition
B. Delivery invoice was not sent with
D. Inventory of the items was not done

81. Development and implementation of a formal Transport Management System (TMS) will support and sustain a successful pharmaceuticals distribution network. According to Ethiopian Pharmaceuticals Supply Agency, pharmaceuticals supplier of public health facilities should guarantee vehicle availability and good working conditions, proper use of vehicles and plan for preventive maintenance and replacement and disposal.

What is the most likely activity TMS and EPSA should undertake?

A. Fleet Management
B. Operations Management
C. Performance management
D. Human resource Management

82. A severely injured patient with fractured femur by traffic accident is hospitalized for 3 months. The patient has been treated with intravenous morphine and he felt better. After discontinuation of the medication, the patient has developed craving symptoms, sweating, irritability, nausea and vomiting.

What is the best preferred medication to treat the patient's condition?

A. Pethidine
B. Naltroxone
C. Oxycodone
D. Methadone

83. A pharmacist who is working in a hospital wants to have objective evidence on the extent of irrational antimicrobials use and its impact. The hospital has a laboratory facility for a drug sensitivity and culture test. There are also periodic reports of a morbidity data and drug consumption data in the hospital.

What is the most appropriate analysis to undertake?

A. To undertake antibiotics resistance pattern tests
B. To check the morbidity pattern of infectious diseases
C. To measure the utilization patterns of the medications
D. To assess the empirical treatment of infectious diseases

84. A pharmacist who is working in a rehabilitation center wanted to help smokers for behavioral changes, in addition to the pharmacological treatments. She wants to give a training equipping with a strategy to assist for behavioral change.

Which strategy is most appropriate to follow?

A. Grouping approach
B. Judgmental approach
C. Connect with quit lines
D. Motivational interviewing

85. An 18-year-old high school student visited a community pharmacy to take an emergency contraceptive pill (ECP) after having unprotected sex one night before.

What is the most likely next step?

A. Provide the pills and council on the side effects
B. Refer her to a health facility for further counseling
C. Council on the risk of unwanted pregnancy
D. Counsel to use other safer contraceptives

86. A mother requested for an appetizer bringing her 3-year-old child with irritability and poor appetite to a community pharmacy. The baby looks wasted, failed to grow with his age and edematous. The pharmacist suspected that the baby's condition might be kwashiorkor and advised the mother go to a health facility for further testing.

What is the most indicative sign for suggesting as the child has kwashiorkor?

A. Failure to grow
B. Loss of appetite
C. Irritability
D. Edema

87. A woman who is a frequent client of a community pharmacy repeatedly asks for post pills. On further discussion, the pharmacist understands that she has multiple sexual partners.

What is the most likely risk for the client?

A. Sexually transmitted disease
B. Menstrual irregularity
C. Acne and hirsutism
D. Dyslipidemia

88. The pharmacist has planned to provide education on an appropriate use of salbutamol puff for asthmatic patients on the waiting area of the ambulatory follow-up clinic.

What is the most appropriate method of education to be given?

A. Group discussions
B. Demonstration
C. Role-playing
D. Drama

89. A pharmacist wants to place a diabetes mellitus education poster in a pharmacy premise with an aim of the information to reach the intended audience.

What is the most likely poster feature to be used?

A. Graphs and drawing
C. Large poster size
B. High pitch sound
D. Long sentences

90. A client made a verbal request for Amoxicillin capsules for her 8 years old daughter with complaints of cough and poor appetite. She requested to purchase only ten capsules of the medication due to financial constraints she has.

What is the most appropriate next step to be taken?

A. Dispense a full dose and pay the remaining
B. Council on non-pharmacological therapy
C. Dispense the requested drug accordingly
D. Refer to a health center or hospital

91. A patient has a right to know the name of medication, side effects, contraindications, how, when and for how long to take the drug that has been prescribed for him\her. This is the promotion of independent choice, self-determination and freedom of action. The pharmacy professional has ethical obligation to stand for this ethical principle while dispensing drugs to patients.

What ethical principle is most likely referred in this scenario?

A. Autonomy
B. Paternalism
C. Beneficence
D. Confidentiality

92. An adult patient presented to a hospital after being bitten by a dog confirmed to be infected with rabies virus. Sufficient counseling was given to him by health care providers. However, the patient refused to be vaccinated.

What should the pharmacist recommend to the health care team?

A. Wait until sign and symptoms are developed
B. Wait until the disease limits itself
C. Decide to vaccinate the patient
D. Respect the patient's autonomy

93. An 18-year-old high school student presents to a local pharmacy repeatedly where his neighbor pharmacist is working with a prescription of sildenafil citrate tablet.

How should the pharmacist handle this issue?

A. Disclose to consultants
C. Disclose to parents
B. Keep confidentiality
D. Refuse to dispense

94. A community pharmacist dispensed prescription only medication without prescription to a patient who visited a pharmacy. The patient felt well after taking the medication. A head of pharmacy told the patient activity done was both illegal and unethical and ordered not to do it again in the future. This is in accordance with one of the ethical theories determination of rightness or wrongness.

What is the most likely type of ethical theory that the above description referring?

A. Ethic of caring theory
C. Utilitarian ethical theory
B. Teleology ethical theory
D. Deontology ethical theory

95. A pharmacist should accept prescriptions only in written format except under emergency or compelling conditions. In case of a prescription is transmitted orally or through telephone, the pharmacist has to register it and get the prescriptions signed by the prescriber as soon as possible. This is one of the ethical standards of pharmacy practice in Ethiopia.

What is the most likely ethical standard of pharmacy practice the above paragraph referring?

A. Rational drug use in pharmacy
B. Dispensing of medications in pharmacy
C. Compounding of pharmaceuticals in pharmacy
D. Pharmaceuticals supply management in pharmacy

96. Acknowledging the truth or possible truths what patients tell you about you while ignoring completely any judgments they might have implied is one of the skills that pharmacy professionals should apply to avoid conflicts with patients during service provision.

What is the most likely conflict resolution skill that the above paragraph describes?

A. Assertiveness B. Mutual respect C. Self-esteem D. Fogging

97. A 65-year old male diabetic patient who discontinued his medication six months ago visited a private hospital for diabetic complications. The patient used to fill his prescription from a nearby community pharmacy, but he did not remember the name of the anti-diabetic medicine he was taking. The physician told the patient to ask the community pharmacy for the information. The patient was worried the information may be lost as it has been a while since he last filled his prescription at the pharmacy.

What is the most likely amount of time that the pharmacy is required to keep the patient's prescription?

A. Two years B. Three years C. Five years D. One year

98. A 27-year-old patient recently diagnosed with diabetes mellitus presented to a pharmacy with his mother to consult about the oral hypoglycemic medicine he is going to start. The patient's mother told to the pharmacist that her child lives with autism.

What is the most appropriate approach the pharmacist should follow?

A. Make all consultations with the patient's mother
B. Refer the patient to the drug information center
C. Advise the patient directly using analogy
D. Send the patient to psychiatry department

99. A patient presented to a pharmacy with a prescription that calls for an extemporaneous preparation. However, one ingredient is missing from the ingredients list.

What is the most appropriate measure to be taken by the pharmacist?

A. Consult with the pharmacy headfirst and correct it if he allows
B. Decide to incorporate the missed ingredient and proceed
C. Explain the error for the patient and correct the prescription
D. Consult the physician and if he refuses, do not compound

100. In work place, medication errors can occur due to different reasons. Workload and fatigue, inexperience, lack of training, and type of order are among the categories of factors that can contribute to medication error.

What is the most likely category of factors that the above statement refers to?

A. Pharmaceutical factors
B. Workplace factors
C. Human factors
D. Economic factors

THE END